

## The returns of IHSG, NIKKEI and NASDAQ during COVID-19 pandemic

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### ABSTRACT

The Covid-19 pandemic has had quite an unfavorable impact, especially on the market return performance of the IHSG, NIKKEI, and NASDAQ. This study aims to analyze the relationship and differences in market return performance in the IHSG, NIKKEI, and NASDAQ in the period from March 3, 2020, to March 3, 2021. This study finds that market returns from the three markets have a positive and significant relationship. Moreover, this study also found that the three markets had the same market return performance during the Covid-19 pandemic.

Keywords: IHSG; NIKKEI; NASDAQ; returns; Covid-19  
JEL Classification: F14; G15; G41

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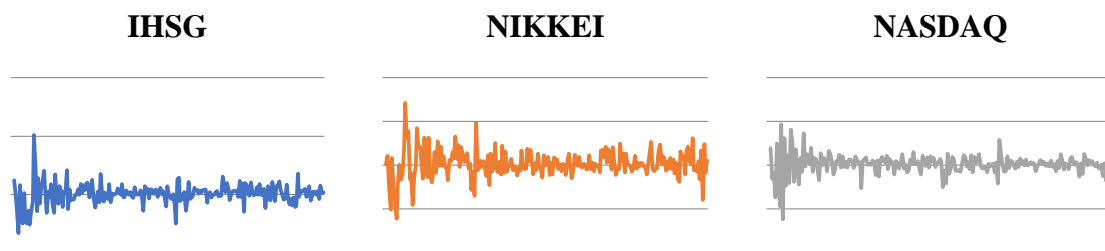


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### 1. Introduction

Returns on an investment are the expected achievement target of investors. The pattern of realized returns for investors with an event will determine the behavior of investors in the market. According to Wibowo and Darmanto (2017), Trisnowati and Muditomo (2021), and Zuhroh and Putri (2021), investors' responses to the market can take the form of overreaction or underreaction depending on events that create good news or bad news. At the beginning of 2020, the world experienced the Covid-19 pandemic which caused a negative impact on almost

all world capital markets including the Composite Stock Price Index (IHSG) in Indonesia. In addition to the IHSG, the NIKKEI and the NASDAQ are financial indicators that have also felt the impact of the Covid-19 pandemic. Figure 1 depicts the market returns of the three markets during the period from March 3, 2020, to March 3, 2021. The purpose of this study is to find out how the performance of the IHSG, NIKKEI, and NASDAQ during the Covid-19 pandemic. In addition, this study also aims to find out how the relationship between the three indices.



**Figure 1. Market returns**

## 2. Literature review

### 2.1. Jakarta Composite Index (JCI/IHSG)

Khoiri and Arghawaty (2020) find that gold and the exchange rate had a negative and significant impact on the IHSG while the Dow Jones index had quite a positive and significant effect on the IHSG in the period from March 1, 2020, to July 2, 2020. Saraswati (2020) find that in the period May 2019-May 2020, the IHSG experienced an unstable condition and a significant decline so it required good synergy between the government, issuers, and investors to deal with the impact of the Covid-19 pandemic. A study from Putranto (2021) in the range of December 1, 2019, to July 31, 2021, shows that the IHSG tends to experience significant changes due to the Covid-19 pandemic. Artha and Paramita (2021) prove that the exchange rate had a negative and significant impact on the IHSG and conversely the condition of the market index in Malaysia had a positive and significant impact on the IHSG from March 2020 to November 2020.

### 2.2. NIKKEI

Gil-Alana and Claudio-Quiroga (2020) find that the effect of Covid-19 had a non-permanent impact on the NIKKEI index. Murdiyanto and Akbar (2021) find that the condition of NIKKEI in the January to December 2020 period experienced a significant contraction during the Covid-19 pandemic but experienced a positive correction when the fiscal stimulus supported the business and consumer

sectors. Onour (2021) prove that NIKKEI experienced a significant impact due to the Covid-19 pandemic in the range of December 2, 2019, to March 13, 2020 and has a high correlation with the Shanghai Stock Exchange. A study from Gunawan (2022) from the period 2017 to 2020 shows that NIKKEI does not significantly affect the IHSG. However, Elfiswandi et al. (2021) prove that NIKKEI had a significant positive impact on the IHSG from January 2 to April 30, 2020.

### 2.3. NASDAQ

The study from Sunarya (2019) uses NASDAQ data from March 1971 to April 2019 and predicts that the NASDAQ has a stagnant condition and does not show a trend in the range of August 2019 to August 2020. This tends to be related to the study from Simon (2003) which find that the NASDAQ index tends to be more influenced by investor sentiment. This is because according to Liu and Lin (2021), the condition of the NASDAQ tends to be more influenced by abnormal information.

## 3. Research method

The data for this study are IHSG, NIKKEI and NASDAQ sourced from the Indonesia Stock Exchange and Yahoo Finance. The sample is taken from March 3, 2020, to March 3, 2021, with a total of 219 observational data. The variables that will be used are the returns from the IHSG, NIKKEI, and NASDAQ which are calculated by the following formula.

$$R_i = (P_i - P_{i-1})/P_{i-1}$$

$R_i$  is the return of each index from period  $i$ ,  $P_i$  is the market price of the index in period  $i$ , and  $P_{i-1}$  is the market price of the index in period  $i-1$ . The tools of analysis are correlation test and difference test with ANOVA approach.

#### 4. Result and discussion

Table 1 shows that IHSG returns have the lowest mean (0.0008) compared to NIKKEI and NASDAQ. Descriptive statistics also shows that the standard deviation of the IHSG is still smaller than that of the NASDAQ, so it can be interpreted that the returns from the IHSG are not dispersed as returns from the NASDAQ. However, the results also show that the standard deviation of the IHSG is still greater than that of NIKKEI, so it can be interpreted that the returns from the IHSG are more dispersed than returns from NIKKEI. The results of the analysis also show that the IHSG and NIKKEI have a positive skewness compared to the NASDAQ, which indicates that the IHSG and NIKKEI have better returns than the NASDAQ. In addition, the kurtosis of the IHSG, NIKKEI, and NASDAQ have positive value which indicate that the peak distribution of returns are quite high.

**Table 1. Descriptive statistics**

	IHSG	NIKKEI	NASDAQ
Mean	0.0008	0.0017	0.0021
Std. Dev.	0.0178	0.0157	0.0236
Min	-0.07	-0.06	-0.12
Max	0.10	0.07	0.09
Skewness	0.274	0.001	-0.675
Kurtosis	5.714	3.392	6.064

Table 2 presents the results of the correlation test between IHSG, NIKKEI, and NASDAQ. The test results show that the IHSG has a positive and significant relationship with NIKKEI. This indicates that the two markets have a unidirectional relationship, in the sense that a positive reaction from the market return from NIKKEI will also have a positive effect on the IHSG. Similar results were also obtained for the relationship between the IHSG and the NASDAQ where the two markets have a positive and significant relationship so that it can be interpreted that an increase in the market return of the NASDAQ will have a positive effect on the market return of the IHSG. On the other hand, the results of the analysis also find that there is a positive and significant relationship between NIKKEI and NASDAQ so that market returns will be positive for the interaction of two markets.

**Table 2. Correlations test**

		IHSG	NIKKEI	NASDAQ
IHSG	Pearson Correlation	1	0.486**	0.317**
	Sig. (2-tailed)		0.000	0.000
	N	219	219	219
NIKKEI	Pearson Correlation	0.486**	1	0.302**
	Sig. (2-tailed)	0.000		0.000
	N	219	219	219
NASDAQ	Pearson Correlation	0.317**	0.302**	1
	Sig. (2-tailed)	0.000	0.000	
	N	219	219	219

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 3 presents the results of ANOVA as the results of the difference test between the IHSG, NIKKEI, and NASDAQ. The results of the Bonferroni test show that the market return of the IHSG does not have a significant difference from the market return of the other two markets, namely NIKKEI and NASDAQ. This result is confirmed by the Games-Howell test which also finds that

the market return of the IHSG does not have a significant difference from the market return of NIKKEI and NASDAQ. Based on the results of the two tests, it can be interpreted that the return performance of the three markets (IHSG, NIKKEI, and NASDAQ) has no significant difference during the Covid-19 pandemic.

**Table 3. ANOVA**

	(I) Code	(J) Code	Mean Difference (I-J)	Std. Error	Sig.
Bonferroni	IHSG	NIKKEI	-0.00085	0.00185	1.000
		NASDAQ	-0.00131	0.00185	1.000
	NIKKEI	IHSG	0.00085	0.00185	1.000
		NASDAQ	-0.00046	0.00185	1.000
	NASDAQ	IHSG	0.00131	0.00185	1.000
		NIKKEI	0.00046	0.00185	1.000
Games-Howell	IHSG	NIKKEI	-0.00085	0.00160	0.857
		NASDAQ	-0.00131	0.00200	0.790
	NIKKEI	IHSG	0.00085	0.00160	0.857
		NASDAQ	-0.00046	0.00192	0.969
	NASDAQ	IHSG	0.00131	0.00200	0.790
		NIKKEI	0.00046	0.00192	0.969

## 5. Conclusion

The Covid-19 pandemic attack at the beginning of 2020 had quite a negative impact on the world economy, especially the capital market. Several world markets, including the Indonesian capital market, have also felt the impact of this pandemic. The purpose of this study is to find out how the relationship and differences in market return performance from the IHSG, NIKKEI, and NASDAQ in the period 3 March 2020 to 3 March 2021. The results of the correlation test analysis show that the three markets have a positive and significant market return relationship. The results of the test by the ANOVA approach also show that the three markets have the same return performance.

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